

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Atty Dkt. 2018-764

C# M#

WAKAHARA, K.



FC/A.U.

3747

Serial No. 10/642,303

Examiner: J. Benton

Filed: August 18, 2003

Date: December 5, 2005

Title: ABNORMALITY DIAGNOSIS APPARATUS AND ENGINE COOLING SYSTEM  
HAVING THE SAMECommissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**RESPONSE/AMENDMENT/LETTER**

This is a response/amendment/letter in the above-identified application and includes an attachment which is hereby incorporated by reference and the signature below serves as the signature to the attachment in the absence of any other signature thereon.

☐ **Correspondence Address Indication Form Attached.****Fees are attached as calculated below:**

Total effective claims after amendment **28** minus highest number  
previously paid for **28** (at least 20) = 0 x \$50.00 \$0.00 (1202)/\$0.00 (2202) \$

Independent claims after amendment **6** minus highest number  
previously paid for **6** (at least 3) = 0 x \$200.00 \$0.00 (1201)/\$0.00 (2201) \$

If proper multiple dependent claims now added for first time, (ignore improper); add

\$360.00 (1051)/\$180.00 (2051) \$

Petition is hereby made to extend the current due date so as to cover the filing date of this  
paper and attachment(s)

One Month Extension \$120.00 (1251)/\$60.00 (2251)

Two Month Extensions \$450.00 (1252)/\$225.00 (2252)

Three Month Extensions \$1020.00 (1253)/\$510.00 (2253)

Four Month Extensions \$1590.00 (1254)/\$795.00 (2254) \$ 450.00

Terminal disclaimer enclosed, add

\$130.00 (1814)/\$65.00 (2814) \$

☐ Applicant claims "small entity" status. ☐ Statement filed herewith

Rule 56 Information Disclosure Statement Filing Fee \$180.00 (1806) \$

Assignment Recording Fee \$40.00 (8021) \$

Other: \$

**TOTAL FEE ENCLOSED \$ 450.00**

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140. A duplicate copy of this sheet is attached.

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Signature: 

12/06/2005 SZEWDIE1 00000148 10642303

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In re Patent Application of

WAKAHARA

Atty. Ref.: 2018-764

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For: ABNORMALITY DIAGNOSIS APPARATUS AND ENGINE COOLING SYSTEM  
HAVING THE SAME

\* \* \* \* \*

December 5, 2005

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**AMENDMENT/RESPONSE**

Responsive to the Office Action dated July 5, 2005, please enter the following  
amendments and consider the following remarks.

2. (previously presented) An abnormality diagnosis apparatus as in claim 1, wherein the flow rate control means includes at least one of a valve and a pump inserted in the circulation line system.

3. (previously presented) An abnormality diagnosis apparatus as in claim 1, wherein the abnormality diagnosis means determines the existence of the abnormality of the flow rate control means based on one of:

an amount of change in the measured coolant temperature measured through the coolant temperature sensor; and

a rate of change in the measured coolant temperature measured through the coolant temperature sensor.

4. (previously presented) An abnormality diagnosis apparatus as in claim 1, wherein the abnormality diagnosis means sets an abnormality diagnosis condition, which is used to determine the existence of the abnormality of the flow rate control means, based on:

a parameter, which relates to an amount of heat generated by the internal combustion engine; and

a parameter, which relates to an amount of heat released from the coolant.

5. (previously presented) An abnormality diagnosis apparatus as in claim 4, wherein: